



Pearson  
Edexcel

Examiners' Report  
Principal Examiner Feedback

Summer 2019

Pearson Edexcel Level 1 Award  
In Number and Measure (ANM10)  
Paper 1A + 1B

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## **Edexcel Award in Number and Measure (ANM10)**

### **Principal Examiner Feedback – Level 1**

#### **Introduction**

This exam paper was accessible to many and gave a good range of marks for the award of a pass.

There was evidence to suggest that students did not always choose to use a calculator on section A.

Students continue to mix up methods, especially for area and perimeter of a rectangle and volume of a cuboid.

Students must read questions carefully so that they give the answer that is required.

Students must make sure they bring mathematical equipment to the examination and use it correctly as there was evidence that some were unable to measure the length of the line or draw an angle of  $75^\circ$  or because of this.

A lack of working for questions that were almost correct caused a lot of students to lose method marks.

#### **Report on Individual Questions.**

##### **Section A**

##### **Question 1**

There was a very high success rate for this question requiring students to read from a table.

Part (b) was the least well done part with some students giving the two makes of kettle with the same capacity rather than the two makes with the same weight. It must be noted for that when we ask 'which make of kettle is the cheapest?' we are requiring the make of kettle and not the cheapest cost.

##### **Question 2**

Many students did well on all three parts of this question requiring the use of a calculator to do some calculations. The only mistakes appeared to be misreading and writing the answer from their calculator incorrectly.

### Question 3

The first part of this question required students to change 235 seconds to a time in minutes and seconds. A significant proportion gained at least one mark for identifying the correct number of minutes.

Quite a number of students who gained M1A0 stated 3 minutes and 9 seconds by calculating  $\frac{235}{60} = 3.9(166\dots)$  and then using the first decimal place as the number of seconds. Another very common misconception was believing that there are 100 minutes in an hour and stating the very popular incorrect answer of 2 minutes 35 seconds.

The next part which asked students to change metres to centimetres was met with a mixed response. Many students gave the correct answer, but there were many who had no idea how many centimetres in a metre.

The final part of the questions asked students to find the total of units given in kilometres and metres. Although we had a good number of correct answers, many correct calculations were awarded only one mark out of two due to missing units. Some students do not understand units and felt that 3 km 780 m was equal to 783 m. 555 appeared quite regularly and this came from  $378 + 412 - 235$  using 3 km 780 m = 378 m etc. Others did not realise there were 1000 m in a km and so gave the answer as 4 km 1550 m which was awarded one mark. A few students added all the measurements and were awarded a special case B1 if they did this correctly.

### Question 4

This 'shopping bill' and change question was well answered by several students, who in many cases showed their working or gained correct results. Some gave an answer close to the correct one but with no working or a few odd figures on the page, so we could not award any marks as there was no evidence of correct working; it must be stressed to students that for any questions with more than one mark they are running a risk of gaining no marks if they make a slight error and have not shown any working.

A handful of students did not read the question thoroughly enough and made careless mistakes such as working out the cost of 1 of each item rather than the given amount of each item; if such students worked correctly they could gain special case marks. Some students forgot to work out the change after finding the total cost and others worked in inconsistent units.

### **Question 5**

This question was well answered with many students gaining full marks. The most common incorrect answer was 16 where students added the three labelled dimensions. Other incorrect attempts involved finding the total length of the edges or the total surface area.

### **Question 6**

This question was generally very well answered. The correct answer was seen frequently and several who did not gain full marks were able to gain a method mark for listing three numbers where two of them were correct. A number of students who did not gain any marks used more than three numbers, often adding all of the numbers in the table. This question was rarely unanswered.

### **Question 7**

Many students gained only two marks out of three for this question on rounding the cost of one item to the nearest penny. These students got to 34(833...) but either didn't know how to round and gave an answer of 34 or didn't interpret pence and gave an answer of 0.34 or 0.35

### **Question 8**

Students were, on the whole, very competent at drawing a bar chart with many instances of awarding full marks. Those that didn't gain full marks were often awarded two marks because of not labelling the bars. Some students tried to label the bars, but the labels did not appear under the bar that it related to with Friday sometimes being at the far right of the diagram and the bar for Friday much further to the left.

### **Question 9**

Few students gained full marks for the area of this shape made of two rectangles. Several added the measurements, giving part of the perimeter while some added values for the whole perimeter. Some students who knew area involved multiplying, multiplied all the given values together. For those who made a reasonable attempt, the main error was an answer of 160 because they included the 6 by 8 rectangle twice by adding  $12 \times 6$  and  $11 \times 8$ ; with working this gained a method mark, but 160 alone gained no marks.

### Question 10

Most students gained the correct answer for this question requiring the difference between an amount of money in pence and an amount in pounds. A significant number of students misread 355p to 335p but as they could follow through and get the 'correct' answer from this misread, a method mark was awarded. A small proportion of students did not convert the currency consistently to pound and pence and subtracted 5.67 from 355 to get £349.33 as a solution. An even smaller, but notable proportion, believed there are 60 pence to the pound.

### Question 11

For part (a) most students were able to write five hundred and nineteen in figures, but a few gave an incorrect answer, 5019 being the most common one that gained no marks.

In part (b) writing a number to the nearest ten was very straightforward for many, but some gave it to the nearest hundred or the incorrect ten.

In part (c) most were able to write 7.6 to the nearest whole number but incorrect answers of 7, 7.7 and 76 were seen regularly.

Part (d) required students to write down a common factor of 30 and 50 was often done correctly. Those who didn't gain the mark that attempted the question gave a multiple of or both of the numbers. Quite a number of students stated the midpoint of both numbers giving 40 as the answer.

Part (e) asked students to write down a multiple of 15 and this was often done correctly with 30 being the most popular correct answer. Those who did not gain the mark often wrote down 3 or 5 instead which suggested they were confused with the meanings of multiple and factor.

### Question 12

For the first part of the question, nearly all students were able to correctly measure the length of the line in cm. A very small number gained no marks for a length in mm.

The second part of the question was not done as well as the first part with many students drawing an angle of  $65^\circ$  or  $105^\circ$  rather than the required  $75^\circ$ . Some students drew an arc of a circle rather than a straight line for the angle. It was pleasing to see the majority of students drawing the angle at the point X rather than sometimes drawing the angle in the middle of the line where, unless labelled, it was impossible to tell which angle the student wanted you to mark and gaining no marks.



### Question 13

In part (a) we saw a large amount of correct answers for giving 80% as a fraction with a small minority giving the incorrect answer of 0.8

For part (b) Students found writing a fraction as a decimal very difficult with  $\frac{2}{5}$  given as a variety of things including 2.5, 4.0 and 25%

Part (c) required students to find 30% of 120, and this was very well answered with many gaining full marks. A common misconception was to divide by 120 and then multiply by 100 giving an incorrect answer of 25.

For the last part, (d), students who did not get full marks for working out  $\frac{3}{5}$  of 70 and showed working often gained a mark for  $3 \times 70 = 210$ . A common misconception seen by those who did not gain further marks was to multiply the numerator and denominator by 70 separately. Those gaining no marks often multiplied 70 by the denominator and divided by the numerator and thus confused the process with that of dividing by a fraction.

### Question 14

Most were able to tell us that Wednesday was the day of the 14th August 2019, however the date three weeks after the 20th August was more difficult. Problems included not knowing how many days are in August, not knowing which month comes after August, counting on just 2 weeks rather than 3, and counting back 3 weeks instead of counting on.

### Question 15

There has been many utility bills questions in the past, so this question should not have been a surprise to students. We did see a good performance from a fair number but also some students who showed little understanding of what was needed. These often didn't know where to start and did various combinations of adding and multiplying any of the given numbers and sometimes included 30, the number of days in April, into the mix. Students who had clearly practised utility bills seemed to interpret the two figures as a starting number of units and a final number of units so subtracted to find the units used.

A good number of students gave the answer £63.99, having forgotten to add on the monthly charge. Others interpreted the monthly charge as 7p, 70p or £70 by the way they lined up the values to add them. This was the only question on the paper that required students to include units and a handful lost the final mark for the correct figure with no units.



## **Section B**

### **Question 1**

This question involved time with part (a) requiring students to add hands to an analogue clock face. Many students were able to correctly add the clock hands to show the time of twenty past nine. In some cases it was very hard to tell which of the hands of the clock was longer and if the same or the wrong way round, students could benefit from one mark which was frequently awarded. For the hour hand, most students had it pointing directly at 9, not slightly more than 9 as it should have been; this was condoned.

Part (b) required students to find the elapsed time from 09:20 to 13:10 was a challenge for many. A common mistake was to get an answer of 4 hours and 10 minutes instead of 3 hours and 50 minutes. There were a lot of errors and these included trying to subtract 0920 from 1310 but not using 60 minutes in an hour. Some students wrote 2 hours and 30 minutes (from 3 hours and 50 minutes is equal to 230 minutes). Several students were able to benefit from including either 3 hours or 50 minutes in their answer.

### **Question 2**

This question needed students to work out an addition sum, a subtraction sum involving decimals and a division sum. For the first part the majority of students were able to correctly set up the addition sum and gain at least 1 mark for showing a correct attempt to add all 3 numbers with evidence of carrying. Incorrect attempts included lining up the columns of numbers incorrectly by aligning on the left and trying to add horizontally with little regard for place value.

For the subtraction sum there was a mixed response with students generally finding 'borrowing' a difficult concept. Some just lined up the numbers as though there was no decimal point and others just wrote down the 3 without thinking of 'borrowing' and then taking it from '10'. Although we saw many incorrect attempts there was a general feeling that this question was better attempted this session than previous sessions.

The division questions was met with a good number of no responses. Few gained full marks, but a good number were able to gain a method mark for a correct first step.

### **Question 3**

This question required students to work with some fractions given in a list in a variety of ways. In part (a) few students were able to give the largest fraction with 9/15 being popular, presumably because it included the biggest number that was in the list as its denominator.

Part (b) asked for the two equivalent fractions with 8/10 and 9/10 being the popular pair, presumably as they have the same denominator.

For part (c) students were asked to subtract fractions and, on the whole, were often able to give the correct answer.

For part (d) Students often did not know how to write the fraction in its simplest form with many blank responses and also random responses that did not appear to be linked to the given unsimplified fraction.

### **Question 4**

An estimate for the cost of 8 cupcakes at 53p each did not seem very demanding, but students really struggled and often gave the incorrect answer. The only answer that was not seen was 7p.

### **Question 5**

This question asked students to firstly read from a scale and secondly to mark a number on a different scale. Reading the number scale was very well done by the majority. A few students read each division on the scale as 1 unit rather than 10 units and gave an answer of 508 rather than 580

Students were generally very good at marking 316 on the number scale. A few incorrectly chose a number between the marks which would not happen on this paper.

### **Question 6**

This question needed students was testing students' knowledge of metric and imperial units. Most students were able to correctly tell us that the metric unit used to give the amount of petrol in a car's tank was litres. A few unfortunately gave 'gallons'.

Students seem unfamiliar with the term 'imperial unit' and we had several responses telling us kilograms. There were a fair number of students who did give us a correct answer of stones or pounds.

### **Question 7**

The majority of students were able to multiply 76 by 1000 with the most common mistake being to multiply by 100 instead. Many students were able to give us the answer to  $7 \times 7$  but a few gave answers close to it such as 48 or 56.

72 divided by 8 was often answered correctly.

### **Question 8**

Most students were able to use the number line to work out both of the calculations involving negative numbers. The few incorrect responses were usually one out, showing they had probably counted the number itself rather than moving on one.

### **Question 9**

This question firstly asked students to order some percentages and this was very well done by the majority of students. The second part of the question asked students to order some decimals and this was much more challenging. In many cases 4.7 was chosen as being lower than 4.68. With around 40% getting the order incorrect, it is an area that needs a lot of practice.

### **Question 10**

A common error for question 10 was to get the area and the perimeter the wrong way round, for which we allowed a special case B1 out of the possible 4 marks.

Some students had answers close to the required ones, but with no working gained no marks; a method mark was awarded for correct working with an incorrect answer.

### **Summary**

Based on their performance on this paper, students are offered the following advice:

- Read questions very carefully and ensure the answer is what is asked for.
- Use the calculator when allowed to do so, i.e. on section A.
- Show all working clearly even on the calculator section.
- Learn conversions between metric units of length, weight and capacity.

- Learn the calculations needed for area, perimeter and volume, and know not to get them mixed up.
- Spend more time revising fractions and decimals and utility bills



